0590

#2 OIPE

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/964,238

DATE: 11/01/2001 TIME: 13:41:55

Input Set : N:\Crf3\RULE60\09964238.txt
Output Set: N:\CRF3\11012001\1964238.raw

3 <110> APPLICANT: Vlaams Interuniversitair Instituut voor Biotechnology 5 <120> TITLE OF INVENTION: SMAD-INTERACTING POLYPEPTIDES AND THEIR USE 7 <130> FILE REFERENCE: 2676-4232US 9 <140> CURRENT APPLICATION NUMBER: 09/964,238 10 <141> CURRENT FILING DATE: 2001-09-26 12 <150> PRIOR APPLICATION NUMBER: 09/449,285 13 <151> PRIOR FILING DATE: 1999-11-24 15 <150> PRIOR APPLICATION NUMBER: PCT/EP98/03193 16 <151> PRIOR FILING DATE: 1998-05-28 ENTERED 18 <150> PRIOR APPLICATION NUMBER: 97201645.5 19 <151> PRIOR FILING DATE: 1997-06-02 21 <160> NUMBER OF SEQ ID NOS: 27 23 <170> SOFTWARE: PatentIn version 3.0 25 <210> SEQ ID NO: 1 26 <211> LENGTH: 3006 27 <212> TYPE: DNA 28 <213> ORGANISM: Mus musculus 30 <400> SEQUENCE: 1 31 gcagcactca gcaccaaatg ctaacccaag gagcaggtaa ccgcaagttc aagtgcacgg 60 120 33 agtqtqqcaa qqccttcaag tacaagcacc acctgaaaaga acacctgaga attcacagtg 35 gtgaaaaacc ttacgaatgc ccaaactgca agaaacgctt ctctcattct gggtcctaca 180 37 gttcacatat cagcagcaag aaatgtattg gtttaatatc agtaaatggc cgaatgagaa 240 300 39 acaatatcaa gacgggttet teceetaatt etgtttette tteteetaet aaeteageea 360 41 ttactcagtt aaggaacaag ttggaaaatg gaaaaccact tagcatgtct gagcagacag 43 gcttacttaa gattaaaaca gaaccactag acttcaatga ctataaagtt cttatggcaa 420 45 cacatgggtt tagtggcagc agtcccttta tgaacggtgg gcttggagcc accagccctt 480 540 47 taggtgtaca eccatetget cagagtecaa tgeageaett aggtgtaggg atggaageee 600 49 ctttacttgg atttcccact atgaatagta acttgagtga ggtacaaaag gttctacaga 51 ttgtggacaa tacggtttct aggcaaaaga tggactgcaa gacggaagac atttcaaagt 660 53 tgaaaggtta tcacatgaag gatccatgtt ctcagccaga agaacaaggg gtaacttctc 720 55 ccaatattcc ccctgtcggt cttccagtag tgagtcataa cggtgccact aaaagtatta 780 840 57. ttgactatac cttagagaaa gtcaatgaag ccaaagcttg cctccagagc ttgaccaccg 59 actcaaggag acagatcagt aacataaaga aagagaagtt gcgtactttg atagatttgg 900 61 tcactgatga taaaatgatt gagaaccaca gcatatccac tccattttca tgccagttct 960 1020 63 gtaaagaaag cttcccgggc cctattcccc tgcatcagca tgaacgatac ctgtgtaaga 1080 65 tgaatgaaga gatcaaggca gtcctgcaac ctcatgaaaa catagtcccc aacaaagctg 67 gagtttttgt tgataataaa geceteetet tgteatetgt aettteegag aaaggaetga 1140 1200 69 caageeecat caaceeatae aaggaeeaca tgtetgtaet gaaageatae tatgetatga 71 acatggagcc caactctgat gaactgctga aaatctccat tgctgtgggc cttcctcagg 1260 1320 73 aatttgtgaa ggaatggttt gagcaaagaa aagtctacca gtattcgaat tccaggtcac 75 catcactgga aaggacctcc aagccgttag ctcccaacag taaccccacc acaaaagact 1380 1440 77 ctttqttacc caggtctcct gtaaaaccta tggactccat cacatcgcca tctatagcag 79 aactccacaa cagtgttacg agttgtgatc ctcctctcag gctaacaaaa tcttcccatt 1500 1560 81 tcaccaatat taaagcagtt gataaactgg accactcgag gagtaatact ccttctcctt

83 taaatettte etecacatet tetaaaaaet eecacagtag etegtaeaet eeaaataget

85 totottocga ggagotgoag gotgagoogt tggacotgto attaccaaaa caaatgagag 87 aacccaaagg tattatagoo acaaagaaca aaacaaaago tactagoata aacttagaco 1620 1680

DATE: 11/01/2001

TIME: 13:41:55

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/964,238

Input Set : N:\Crf3\RULE60\09964238.txt
Output Set: N:\CRF3\11012001\1964238.raw

89	acaa	cagt	gt ti	ctto	catco	r tct	tgaga	aatt	caga	atgag	gcc '	tctga	atti	tg ad	ctttt	tatca	1800
91	agaaa	agagt	tt ti	caaa	attct	: aat	taac	ctgg	acaa	ataaa	aag	caaca	aacco	ct gi	tgtto	eggea	1860
93	tgaad	cccat	tt ta	agtgo	ccaag	r cct	tttat	taca	ccc	ctcti	tcc a	accad	caga	ge ge	catti	tàcac	1920
95	ctgc	cacti	tt ca	atgc	cacca	gto	ccaga	acca	gcat	ccc	cgg (gctad	cgaco	ca ta	accca	aggac	1980
																tacct	2040
		_	_	-			_							_	_	cttgc	2100
	_	_	-	-			_									cctgtc	2160
			_		-		-		-	_		-	-			gtgaca	2220
																agagac	2280
	_		_	_				_	-			_				agcact	2340
																tctcac	2400
																aggcgg	2460
																	2520
					-					-		_				ccgagc	2580
	_	-	_		-		-									cggagg	
				_												gcgagg	2640
																aggaag	2700
																agactg	2760
																accacg	2820
																attttt	2880
																tgcacg	2940
129	tgc	ctgad	cgc 1	ttcca	aggaa	ig c	tgta	gaga	g gga	acaaa	aaag	ggg	cacti	tca q	gccaa	agtctg	3000
	agti																3006
134	<210)> SI	EQ II	ОИ С	: 2												
135	<21	l> L	ENGTI	H: 94	14												
136	<212	2> T	YPE:	PRT													
137	<21	3> OI	RGAN:	ISM:	Mus	mus	culus	3									
139	<400)> SI	EQUE	NCE:	2												
141	Met	Leu	Thr	Gln	Gly	Ala	Gly	Asn	Arg	Lys	Phe	Lys	Cys	Thr	Glu	Cys	
142					5		-		_	10		_	-		15		
144	Gly	Lys	Ala	Phe	Lys	Tyr	Lys	His	His	Leu	Lys	Glu	His	Leu	Arq	Ile	
145	•	•		20	-	-	•		25		-			30	_		
	His	Ser	Glv	Glu	Lys	Pro	Tvr	Glu	Cvs	Pro	Asn	Cvs	Lvs	Lvs	Ara	Phe	
148			35		-1-		1	40				2	45		,		
	Ser	His		Glv	Ser	тvr	Ser		His	Tle	Ser	Ser	-	Lvs	Cvs	Tle	
151		50		0-1		-1-	55				-	60	-1-	-1-	-1-		
	Glv		τlο	Ser	Val	Δen		Δτα	Met	Δra	Δen		Tle	T.vc	Thr	Glv	
154		LCu	110	UCI	VUI	70	GLY	nrg.	MCC	Arg	75	ASII	110	БуБ	1111	80	
		Cor	Dro	A an	Ser		Cor	Cor	cor	Dro		Aan	Cor	λla	Tlo		
	ser	ser	PIO	ASII		Val	ser	ser	ser		1111	ASII	ser	нта	95	THI	
157	01	T	7		85	T	a 1	3	01	90	D	T	G	Mah		G1.,	
	GIN	Leu	Arg		Lys	Leu	GIU	ASII		ьys	Pro	Leu	ser		ser	GIU	
160	~ 3	-1		100	_	_		_	105	a ?	_	-	_	110		•	
	GIn	Thr	_	Leu	Leu	Lys	ITe		Thr	GLu	Pro	Leu		Pne	Asn	Asp	
163			115			_		120	_	_			125		_		
	_	_	Val	Leu	Met	Ala		His	Gly	Phe	Ser		Ser	Ser	Pro	Phe	
166		130					135					140					
		Asn	Gly	Gly	Leu		Ala	Thr	Ser	Pro		Gly	Val	His	Pro		
	145					150					155					160	
171	Ala	Gln	Ser	Pro	Met	Gln	His	Leu	Gly	Val	Gly	Met	Glu	Ala	Pro	Leu	
172					165					170					175		

RAW SEQUENCE LISTING DATE: 11/01/2001 PATENT APPLICATION: US/09/964,238 TIME: 13:41:55

Input Set : N:\Crf3\RULE60\09964238.txt
Output Set: N:\CRF3\11012001\1964238.raw

174 175	Leu	_	Phe	Pro 180	Thr	Met	Asn	Ser	Asn 185	Leu	Ser	Glu	Val	Gln 190	Lys	Val
177	Leu		Ile		Asp	Asn	Thr	Val 200		Arg	Gln	Lys	Met 205	Asp	Cys	Lys
178 180	Thr	Glu	195 Asp	Ile	Ser	Lys			Gly	Tyr	His			Asp	Pro	Cys
181 183	Ser	210 Gln	Pro	Glu	Glu	Gln	215 Glv	Val	Thr	Ser	Pro	220 Asn	Ile	Pro	Pro	Val
184	225					230	_				235					240
186 187	GIY	Leu	Pro	Val	245	ser.	HIS	Asn	GIÀ	A1a 250	Tnr	гĀЗ	ser	Ile	255	Asp
189 190	Tyr	Thr	Leu	Glu 260	Lys	Val	Asn	Glu	Ala 265	Lys	Ala	Cys	Leu	Gln 270	Ser	Leu
	Thr	Thr	Asp 275	Ser	Arg	Arg	Gln	Ile 280	Ser	Asn	Ile	Lys	Lys 285	Glu	Lys	Leu
195	Arg			Ile	Asp	Leu			Asp	Asp	Lys			Glu	Asn	His
196 198	Ser	290 Ile	Ser	Thr	Pro	Phe	295 Ser	Cys	Gln	Phe	Cys	300 Lys	Glu	Ser	Phe	Pro
	305	_		_	_	310	~ 1		a 1		315		G	T	37-L	320
202	_				325					330				Lys	335	
204 205	Glu	Glu	Ile	Lys 340	Ala	Val	Leu	Gln	Pro 345	His	Glu	Asn	Ile	Val 350	Pro	Asn
	Lys	Ala	Gly 355	Val	Phe	Val	Asp	Asn 360	Lys	Ala	Leu	Leu	Leu 365	Ser	Ser	Val
210	Leu			Lys	Gly	Leu			Pro	Ile	Asn			Lys	Asp	His
211	Mot	370	Val	Ľen	T.ve	Δla	375	Tur	Δla	Met	Asn	380 Met	Glu	Pro	Asn	Ser
	385	DCI	Vai	пси	БуЗ	390	- 7 -	-1-	mu	,	395	1100	O-u	110	11011	400
216 217	Asp	Glu	Leu	Leu	Lys 405	Ile	Ser	Ile	Ala	Val 410	Gly	Leu	Pro	Gln	Glu 415	Phe
	Val	Lys	Glu	Trp 420	Phe	Glu	Gln	Arg	Lys 425	Val	Tyr	Gln	Tyr	Ser 430	Asn	Ser
	Arg	Ser	Pro		Leu	Glu	Arg	Thr		Lys	Pro	Leu		Pro	Asn	Ser
223		D	435	mla	T	3	Q	440	T	D	3	G	445	17- 1	T	Dwo
225		450	Thr	THE	гуѕ	ASP	455	ьeu	Leu	PIO	Arg	460	PIO	Val	гуѕ	PIO
		Asp	Ser	Ile	Thr		Pro	Ser	Ile	Ala		Leu	His	Asn	Ser	
	465 Thr	Ser	Cvs	Asp	Pro	470 Pro	Leu	Ara	Leu	Thr	475 Lvs	Ser	Ser	His	Phe	480 Thr
232			_		485					490					495	
234235	Asn	Ile	Lys	Ala 500	Val	Asp	Lys	Leu	Asp 505	His	Ser	Arg	Ser	Asn 510	Thr	Pro
	Ser	Pro	Leu		Leu	Ser	Ser	Thr		Ser	Lys	Asn	Ser	His	Ser	Ser
238	_	_	515	_	_		_,	520	_		~ 1	_	525	. 1	a 2	T
240 241	ser	Tyr 530	Thr	Pro	Asn	ser	Phe 535	ser	ser	GLU	GLU	Leu 540	GIN	Ala	GIU	PTO
243			Leu	Ser	Leu			Gln	Met	Arg		Pro	Lys	Gly	Ile	
	545 Ala	Thr	Lvc	Asn	Lvs	550 Thr	Lvs	Ala	Thr	Ser	555 Ile	Asn	Leu	Asp	His	560 Asn
		***	-10		-13		-, -									

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/964,238

DATE: 11/01/2001 TIME: 13:41:55

Input Set : N:\Crf3\RULE60\09964238.txt
Output Set: N:\CRF3\11012001\I964238.raw

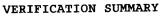
										- 70					575	
247		_	_	_	565	_		_	a	570	01	D	T	3 ~ ~	575	mh m
	Ser	Val	Ser		Ser	Ser	Glu	Asn		Asp	GLu	Pro	Leu		Leu	THE
250				580	_	_		_	585	_	_	_		590	.	Q
	Phe	Ile		Lys	Glu	Phe	Ser		Ser	Asn	Asn	Leu		Asn	Lys	ser
253			595					600					605	_	_	_
	Asn	Asn	Pro	Val	Phe	Gly		Asn	Pro	Phe	Ser		Lys	Pro	Leu	Tyr
256		610					615					620				_
258	Thr	Pro	Leu	Pro	Pro		Ser	Ala	Phe	Pro		Ala	Thr	Phe	Met	
	625					630					635			_		640
261	Pro	Val	Gln	Thr	Ser	Ile	Pro	Gly	Leu		Pro	Tyr	Pro	Gly	Leu	Asp
262					645					650		,			655	
264	Gln	Met	Ser	Phe	Leu	Pro	His	Met	Ala	Tyr	Thr	Tyr	Pro		Gly	Ala
265				660					665					670		
267	Ala	Thr	Phe	Ala	Asp	Met	Gln	Gln	Arg	Arg	Lys	\mathtt{Tyr}	Gln	Arg	Lys	Gln
268			675					680					685			
270	Gly	Phe	Gln	Gly	Asp	Leu	Leu	Asp	Gly	Ala	Gln	Asp	Tyr	Met	Ser	Gly
271		690					695					700				
273	Leu	Asp	Asp	Met	Thr	Asp	Ser	Asp	Ser	Cys	Leu	Ser	Arg	Lys	Lys	Ile
	705	~	-			710					715					720
276	Lys	Lys	Thr	Glu	Ser	Gly	Met	Tyr	Ala	Cys	Asp	Leu	Cys	Asp	Lys	Thr
277	•	-			725	-		_		730					735	
279	Phe	Gln	Lvs	Ser	Ser	Ser	Leu	Leu	Arg	His	Lys	Tyr	Glu	His	Thr	Gly
280			1	740					745		_	_		750		
	Lvs	Ara	Pro	His	Gln	Cvs	Gln	Ile	Cys	Lys	Lys	Ala	Phe	Lys	His	Lys
283		5	755					760	•	-	-		765	_		
		His		Ile	Glu	His	Ser	Arq	Leu	His	Ser	Gly	Glu	Lys	Pro	Tyr
286		770					775	,				780		_		_
	Gln		Asp	Lvs	Cvs	Glv		Ara	Phe	Ser	His	Ser	Gly	Ser	Tyr	Ser
	785	972		-1-	- 1 -	790	1	,			795		-		-	800
		His	Met	Asn	His		Tvr	Ser	Tvr	Cvs	Lvs	Arq	Glu	Ala	Glu	Glu
292	0				805	5	- 4	-	-	810	•	_			815	
	Ara	Glu	Ala	Ala		Ara	Glu	Ala	Arq	Glu	Lys	Gly	His	Leu	Gly	Pro
295	5			820		,			825		-	-		830	-	
	Thr	Glu	Leu		Met	Asn	Ara	Ala	Tvr	Leu	Gln	Ser	Ile	Thr	Pro	Gln
298		014	835				5	840					845			
		Tvr		Asp	Ser	Glu	Glu		Glu	Ser	Met	Pro	Arq	Asp	Gly	Glu
301		850	202				855	3				860		-	-	
			Lvs	Glu	His	Glu		Glu	Glv	Glu	Glu	Glv	Tvr	Glv	Lvs	Leu
	865	OIG	1,5	014	11.2.0	870	_10	024	0_1		875	1	-1-			880
306	Ara	Δra	Arσ	Asp	Glv	Asp	Glu	Glu	Glu	Glu		Glu	Glu	Glu	Glu	Ser
307		**** 9	**** 9	P	885					890					895	
		Δcn	T.v.c	Ser		Asp	Thr	Asp	Pro		Thr	Tle	Ara	Asp		Glu
310		ASH	цуз	900	1100	P		p	905				,	910		
		ሞĥ Υ	Glv		His	Ser	Met	Asn		Ser	Ser	Glu	Asp		Lvs	Met
313		1111	915	usb	пто	DCI	1100	920	пор	DCI	501	OLu	925	011	2,2	
		Πh~		cor	λen	Hic	Glu		Δen	Δcn	Mot	Glu		Glv	Met	Gly
316		930	ъys	DET	ռոր		935		rrah	11011		940		1		1
		930 (S S	EO T	רא ת	. 3		,,,,					740				
213	<21	1> L	engt.	п; 2	ランフ											

RAW SEQUENCE LISTING

DATE: 11/01/2001 TIME: 13:41:55 PATENT APPLICATION: US/09/964,238

Input Set : N:\Crf3\RULE60\09964238.txt Output Set: N:\CRF3\11012001\I964238.raw

320 <212> TYPE: DNA 321 <213> ORGANISM: Mus musculus 323 <400> SEQUENCE: 3 324 ctggctaggc gtcgcggact ccggagatgg aggaaaagga gcagctgcgg cggcagatac 60 326 gcctcctgca gggtctaatt gatgactata aaacactcca cggcaatggc cctgccctgg 120 180 328 gcaactcatc agctactcgg tggcagccac ccgtgttccc gggtggcagg acctttggcg 240 330 cccgctactc ccgtccaagt cggaggggct tctcctcaca ccatggccct tcgtggcgca 300 332 agaaatactc ccttgtgaat cagcctgtgg aatcttctga cccagccagc gatcctgctt 360 334 ttcagacatc cctcaggtct gaggatagcc agcatcctga accccagcag tatgtactgg 336 agagacaggt ccagctcagt ccagatcaga atatggttat taagatcaag ccaccatcaa 420 338 agtcaggtgc catcaatgct tcaggggtcc agcgggggtc cttggaaggc tgtgatgacc 480 340 cctcttggag tggccaaaga ccccaaggaa gtgaggttga ggtccctggt ggacaactgc 540 342 agcctgcaag gccaggaaga accaaggtgg gttacagtgt ggacgacccc ctcttggtct 600 344 gccagaagga gcctggcaag cctcgggtag tgaagtctgt gggcagggtg agtgacagct 660 346 ctcccgagca tcggcggaca gtcagtgaaa atgaagtggc cctcagggta cacttcccat 720 348 ctgtcctgcc ccatcacact gctgtggctc tgggcaggaa ggtaggccct cattctacca 780 840 350 gctattctga acagttcatt ggagaccaaa gagcaaacac tggccactca gaccagccag 352 cttccttggg gccagtggtg gcttcagtca gaccagcaac agccaggcag gtcagggagg 900 354 cctcactgct cgtgtcctgt cgaaccagca agtttcggaa aaacaactac aaatgggtag 960 356 ctgcctcaga aaagagccca cgggtcgctc ggagagccct cagtcccaga acaactctgg 1020 358 agagcgggaa caaggccact ttgggtacag ttggaaagac agagaagcca cagcctaaag 1080 360 ttgacccaga ggtgaggccg gagaaactgg ccacaccatc caagcctggc ctctctccca 1140 362 gcaagtacaa gtggaagget teeageeegt etgetteete etetteetet tteegttgge 1200 364 agtctgaggc tggcagcaag gaccatactt ctcagctctc cccagtccca tctaggccca 1260 366 catcagggga cagaccagca gggggaccca gcagcttgaa gcccctcttt ggagagtcac 1320 368 agctctcagc ttacaaagtg aagagccgga ccaagattat ccggaggcgg ggcaatacca 1380 370 gcattcctgg ggacaagaag aacagcccta caactgccac caccagcaaa aaccatctta 1440 372 cccagcgacg gagacaggcc ctccggggga agaatagccc ggttctaagg aagactcccc 1500 374 acaagggtet gatgeaggte aacaggeace ggetetgetg cetgeegtee ageeggaeee 1560 376 acctetecae caaggaaget teeagtgtge acatggggat teeaccetee aataaggtga 1620 378 tcaagacccg ctaccgcatt gttaagaaga ccccaagctc ttcctttggt gctccatcct 1680 1740 380 teceteate tetaceetee tggegggeee ggegeateee attatecagg teeetagtge 1800 382 taaaccgcct tcgtccagca atcactgggg gagggaaagc cccacctggt acccctcgat 384 ggcgcaacaa aggctaccgc tgcattggag gggttctgta caaggtgtct gccaacaagc 1860 386 totocaaaac ttotagoagg cocagtgatg goaacaggac cotoctocgc acaggacgco 1920 1980 388 tggaccctgc taccacctgc agtcgttcct tggccagccg ggccatccag cggagcctgg 2040 390 ctatcatccg gcaggcgaag cagaagaaag agaagaagag agagtactgc atgtactaca 2100 392 acceptting caggigata cetting categorate cetting categorates cetting categorates acceptance cetting categorates categorates categorates acceptance cetting categorates categorates acceptance cetting categorates categorates acceptance cetting categorates categorates acceptance cetting categorates acceptance categorates 394 tggccgtgtg caccagattt gtccgaggca catgcaagaa gacagatggg tcctgccctt 2160 396 tctctcacca tgtgtccaag gaaaagatgc ctgtgtgctc ctactttctg aaggggatct 2220 2280 398 gcagcaacag caactgcccc tacagccatg tgtacgtgtc ccgcaaggct gaagtctgca 400 gtgacttcct caaaggctac tgcccattgg gtgcaaagtg caagaagaag cacacgctgc 2340 402 tgtgtcctga ctttgcccgc aggggtattt gtccccgtgg ctcccagtgc cagctgctcc 2400 404 atogtaacca gaagogacat ggooggogga cagotgoacc tootatooot gggoocagtg 2460 406 atggagcccc cagaagcaag gcctcagctg gccacgtact caggaagcct actactactc 2520 408 agcgctctgt cagacagatg tccagtggtc tggcttccgg agctgaggcc ccagcctccc 2580 410 cacctccctc cccaagggta ttagcctcca cctctaccct gtcttcaaag gccaccgctg 2640 412 cctcctctc ttcccctct ccctctacta gctccccagc cccttccttg gagcaggaag 2700 414 aagctgtctc tgggacaggc tcaggaacag gctccagtgg cctctgcaag ctgccatcct 2760



PATENT APPLICATION: US/09/964,238

DATE: 11/01/2001 TIME: 13:41:56

Input Set : N:\Crf3\RULE60\09964238.txt
Output Set: N:\CRF3\11012001\I964238.raw

```
L:652 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5
L:732 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7
L:736 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7
L:738 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7
L:804 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9
L:886 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11
L:888 \text{ M}:341 \text{ W}: \text{ (46) "n" or "Xaa" used, for SEQ ID$#:}11
L:892 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11
L:923 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12
L:925 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12
L:950 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13
L:952 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13
L:956 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13
L:958 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13
L:985 M:341 W: (46) "n" or "Xaa" used, for \overline{SEQ} ID#:14
L:1012 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15
L:1014 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15
L:1016 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15
L:1018 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15
L:1047 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16
L:1049 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16
L:1051 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16
L:1066 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17
L:1076 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17
L:1095 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18
L:1103 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18
L:1105 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18
L:1107 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18
L:1109 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18
L:1124 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19
L:1134 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19
L:1159 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
L:1161 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
L:1163 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
L:1165 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
```